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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,514	01/29/2004	Oscar E. Agazzi	13479US04	5537
23446 7590 03/20/2007 MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			EXAMINER HA, DAC V	
			ART UNIT	PAPER NUMBER
			2611	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/20/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/767,514

Applicant(s)

AGAZZI, OSCAR E.

Examiner

Dac V. Ha

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claims 1-18** are rejected on the ground of nonstatutory double patenting over claims 1-18 of U. S. Patent No. 6,792,038 and 6,212,225 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: claims 1-18 of the present application is a variation (broader version) of that of claims 1-18 in Patent No. 6,792,038 and 6,212,225.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of

Art Unit: 2611

the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonikberg et al. (US 5,864,545) (hereafter Gonikberg).

Regarding claim 1, the general structure and operation of transceivers or modems in a communication system or network is well known in the art despite design variation. Gonikberg et al. disclose a System And Method For Improving Convergence During Modem Training And Reducing Computational Load During Steady-State Modem Operations which implicitly teaches the claimed subject matter “for each transceiver, separating ... reduction system” by means of adaptively decoupling the echo canceller and the equalizer so as to “separate” the echo canceller and the equalizer during a particular training phase, thus, provide effective training for the echo canceller and the equalizer (Figure 4, elements 40; Figures 5A, 5B; Column 6, line 49 to Column 7, line 11.)

Regarding claim 2, Gonikberg et al. further teach the claimed subject matter “converging ... system of the master” as follows. In the transmit-only phase, the echo canceller of the “master” transceiver is converging while the equalizer is converging the

Art Unit: 2611

receiving ("slave") transceiver. In the receive-only phase, the equalizer is converging in the master transceiver while the echo canceller is converging in the slave transceiver. After that, the system enter a full-duplex transmission (including training and data communicating) wherein the echo canceller could have been retrained (Column 5, line 9 to Column 7, line 50.) Further, even though Gonikberg et al. only indicate that the modem receiver should be synchronized with the remote modem utilizing the clock recovery circuit (Figure 6, element 682; Column 9, lines 66-67; Column 10, lines 8-11) one skilled in the art would have understood that time converging utilizing training would have occurred at the receiving (i.e. during which the equalizer is converging.)

Regarding claim 3, the claimed subject matter "wherein ... system of the master" would have been realized by one skilled in the art since it is known in the art at starting up of a system, preset parameters or the latest value could have been utilized.

Regarding claim 4, the claimed subject matter "wherein ... system of the slave" would have been realized by one skilled in the art since it is known in the art that after the system is in sync, it should have been maintained.

Regarding claim 5, Gonikberg et al. further teach the claimed subject matter "wherein ... canceller" in Figure 3, element 310.

Regarding claim 6, Gonikberg et al. further teach the claimed subject matter "wherein ... cancellation system" in Column 7, line 67 to Column 8, line 2.

Regarding claim 7, Gonikberg et al. disclose a System And Method For Improving Convergence During Modem Training And Reducing Computational Load During Steady-State Modem Operations which implicitly teaches the claimed subject

Art Unit: 2611

matter “executing a first stage ... executing a second stage ... slave is trained” in Column 3, lines 4-15. Gonikberg et al. further suggest the teaching of the claimed subject matter “executing a third ... is retrained” is conventional in the art in Column 5, lines 27-31.

Regarding claim 8, Gonikberg et al. further suggest the teaching of the claimed subject matter “transitioning ... third stage” in Column 3, lines 30-50; Column 6, line 44 to Column 7, line 50.

Regarding claim 9, the claimed subject matter “wherein ... duration” would have been obvious to one skilled in the art since how to utilize the initialization period is well known in the art.

Regarding claim 10, the claimed subject matter “wherein ... equal” would have been obvious to one skilled in the art since how to utilize the initialization period is well known in the art.

Regarding claim 11, Gonikberg et al. further teach the claimed subject matter “transmitting ... master” in Column 5, lines 9-59; Column 6, line 61 to Column 7, line 50.

Regarding claim 12, Gonikberg et al. further teach the claimed subject matter “wherein ... the slave” in Column 6, lines 39-60; Column 7, lines 7-19.

Regarding claim 13, Gonikberg et al. further teach the claimed subject matter “transmitting ... slave” in Column 5, lines 9-59; Column 6, line 61 to Column 7, line 50.

Regarding claim 14, Gonikberg et al. further teach the claimed subject matter “wherein ... the master” in Column 6, line 39 to Column 7, line 6.

Regarding claims 15-18, see the combination of claims 1-14 above.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the teaching of "separately" converging the echo canceller and the equalizer the a modem system taught by Gonikberg et al. with appropriate modification to at least improve the convergence rate of the system.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hasegawa et al. (US 7,167,509) discloses Digital Subscriber Line Communicating System And A Transceiver In The System.

Rezvani et al. (US 6,965,657) discloses Method And Apparatus For Interference Cancellation In Shared Communication Medium.

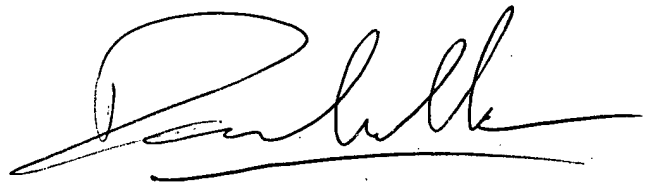
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-3086. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2611

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a long horizontal flourish extending to the right.

Dac V. Ha
Primary Examiner
Art Unit 2611